

SHOWAIRREJ TO TAK HARB ROAD PAVING
COMMANDER'S EMERGENCY RESPONSE PROGRAM
NINEWA GOVERNORATE, IRAQ

SUSTAINMENT ASSESSMENT

SIGIR PA-07-107
OCTOBER 22, 2007

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SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

October 22, 2007

MEMORANDUM FOR COMMANDING GENERAL, MULTI-NATIONAL FORCES-
IRAQ,
COMMANDER, JOINT CONTRACTING COMMAND-
IRAQ/AFGHANISTAN
COMMANDER, GULF REGION DIVISION, U.S. ARMY
CORPS OF ENGINEERS
DIRECTOR, IRAQ TRANSITION ASSISTANCE OFFICE

SUBJECT: Report on Commander's Emergency Response Program for Showairrej to
Tak Harb Road, Ninewa Governorate, Iraq (Report Number SIGIR-PA-07-
107)

The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Commander's Emergency Response Program to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

We are providing this report for your information and use. It addresses the current status of the Showairrej to Tak Harb Road, Ninewa Governorate, Iraq. The assessment was made to determine whether the project was operating at the capacity stated in the original contract.

This report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required.

We appreciate the courtesies extended to our staff. If you have any questions please contact Mr. Brian Flynn at brian.flynn@iraq.centcom.mil or at DSN 318-343-9244. For public or congressional queries concerning this report, please contact SIGIR Congressional and Public Affairs at publicaffairs@sigir.mil or at (703) 428-1100.

Stuart W. Bowen, Jr.
Inspector General

Special Inspector General for Iraq Reconstruction

SIGIR PA-07-107

October 22, 2007

Showairrej to Tak Harb Road Commander's Emergency Response Program Ninewa Governorate, Iraq

Synopsis

Introduction. The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Commander's Emergency Response Program to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

The objective of the project was to construct a new 11-kilometer asphalt road, with shoulders, from the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb, in the Ninewa governorate. This road serves multiple villages with large indigenous populations, bringing emergency services, transportation, and opportunity for commerce to this underdeveloped area. The contract included specific requirements for adhering to Iraqi Building Codes. On 13 September 2006, a firm-fixed-fee contract of \$1,439,175 was awarded to a local contractor for the road paving.

Project Assessment Objectives. The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties to enable appropriate action, when warranted. Specifically, the Special Inspector General for Iraq Reconstruction determined whether the project was operating at the capacity stated in the original contract. To accomplish the objective, the Special Inspector General for Iraq Reconstruction determined if the project was at full capability or capacity when accepted by the United States government, when transferred to Iraqi operators, and during the site inspection on 19 September 2007.

Conclusions. The new asphalt road contributes to economic activity, emergency response, law enforcement, and safe pedestrian travel between Showairrej, Taq Meka'ael, and Tak Harb in the Mosul District of the Ninewa governorate. It replaced a road that was impassable, especially during the rainy season. Adequate quality management oversight by the contractor and the United States government enforced the contract's Statement of Work, ensuring construction quality and completeness.

In addition, a review of the contract file did not reveal any sustainability issues associated with the project turnover. There was no need for specialized equipment to be provided by the contract or for any maintenance manuals.

Recommendations and Management Comments. Our report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required. However, the United States Army Corps of Engineers, Gulf Region Division reviewed the draft report and offered no additional information or comments.

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Introduction

Objective of the Project Assessment

The Office of the Special Inspector General for Iraq Reconstruction (SIGIR) is assessing projects funded under the Commander's Emergency Response Program (CERP) to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted. The objective of this project assessment was to determine whether the project was operating at the capacity stated in the original contract. To accomplish the objective, we determined if the project was at full capability or capacity when accepted by the U.S. government, when transferred to Iraqi operators, and during our site inspection on 19 September 2007.

Pre-Site Assessment Background

Contract, Costs and Payments

Contract W917BE-06-C-0064 was awarded to a contractor on 13 September 2006. The contract was a firm fixed fee contract in the amount of \$1,439,175.

Based on information provided by the United States Army Corps of Engineers (USACE) Gulf Region North (GRN), the project started in September 2006 and was completed in July 2007. The contract contained a warranty clause, which stated that the warranty period is for one year from date of acceptance.

Statement of Work

The Statement of Work (SOW) required the construction of a new 11-kilometer (km) asphalt road with shoulders from the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb in the Ninewa Governorate, Iraq. The road construction was to consist of excavation, sub grade preparation, drainage, ditching, and asphalt paving.

Project Objective, Pre-Construction Description

The objective of this project was to construct a new 11-kilometer asphalt road with shoulders from the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb in Mosul, Iraq (Figure 1). The project was to make the existing roadway that was impassable, especially during the rainy season, into a functioning asphalt road. The 11km main road to the villages of Showairrej, Taq Meka'ael, and Tak Harb was being utilized during our site assessment.

Based upon our review of the SOW and the contractor's pre-construction photographs, it appeared the construction of the new road segments was well planned and focused on a high priority need. The existing unpaved and impassable road required excavation, sub grade preparation, base construction, drainage, ditching, and asphalt paving. New construction focused on leveling, rolling, laying sub base layers, culverts, and asphalt paving.

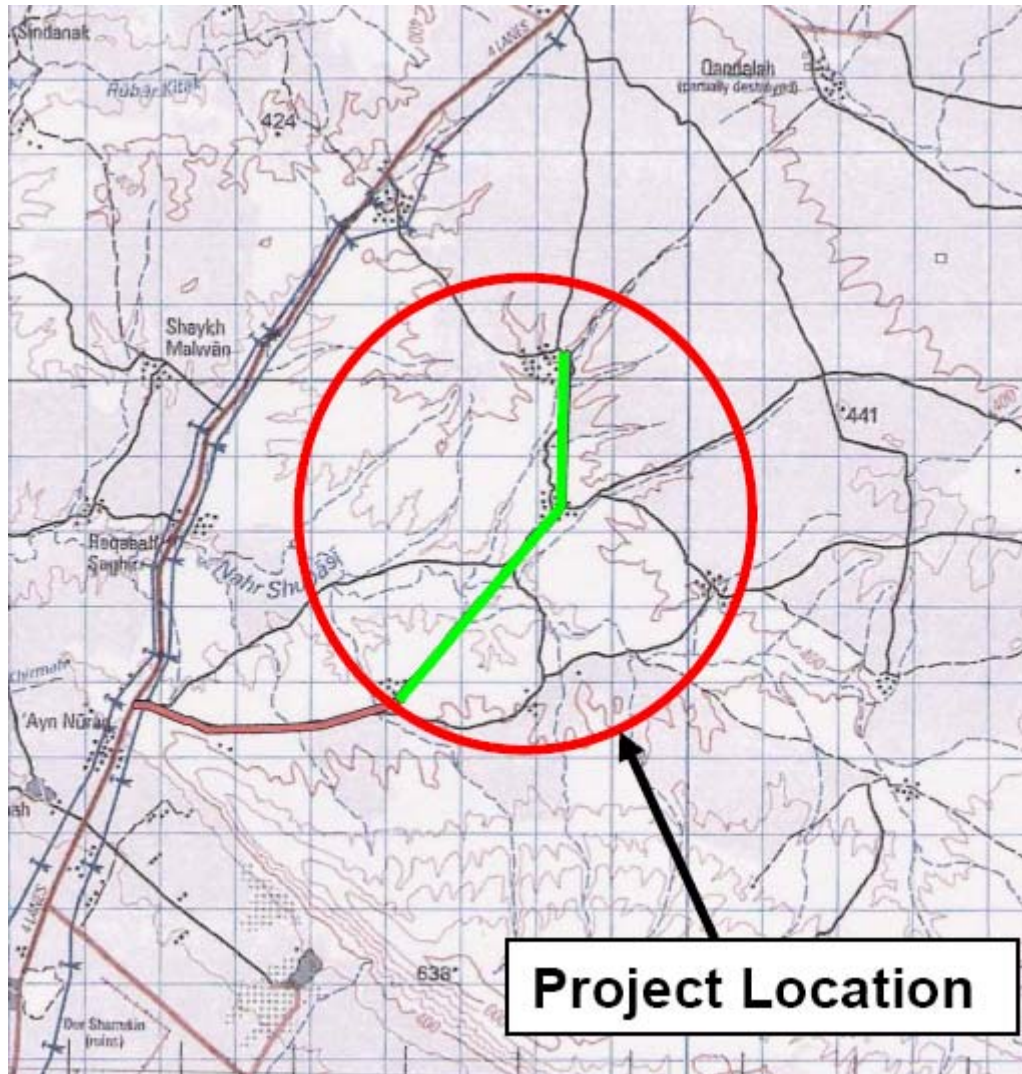


Figure 1. Map location of the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb

Project Design

The contract's SOW required the contractor to comply with the following specifications:

- Design criteria manual "Republic of Iraq; Ministry of Housing and Construction; State Organization of Roads and Bridges; Highway Design Manual; 1982 Design and Study Department; Road and Traffic Division".
- Standard Iraqi specifications as stated in the "Republic of Iraq; Ministry of Housing and Construction; State Organization of Roads and Bridges; Standard Specification for Roads and Bridges; Department of Design and Studies, 1983.
- Road design and construction shall conform to the Iraqi Design Criteria D2-9.5.

Based on our review, even though the USACE GRN could not locate the designs submitted, the construction of the asphalt roads appeared to be satisfactory.

Site Progress During Construction

Throughout the road construction project, numerous progress photographs were taken and provided to the assessment team prior to our site visit. We reviewed and subsequently relied on selected photographs to document examples of construction completed in accordance with SOW requirements before the project was turned over in July 2007.

Site Photo 1 documents the condition of the road prior to the commencement of the construction of the main rural road. The contractor removed excess road materials so the road elevations would be level. Site Photo 2 documents the removal of the excess road material; while Site Photo 3 shows the contractor excavating the road. The contractor leveled the road, which is shown in Site Photo 4. In addition, the contractor utilized rubber tire pneumatic rollers and steel drum rollers to compact the sub-base as shown in Site Photo 5. In Site Photo 6, the contractor has supplied sub-base material for the road. The tack coat application to the sub-base is shown in Site Photo 7.

In accordance with the Iraqi Standard Specifications for Roads and Bridges, the construction of culverts was required; however, the locations for the culverts were not specified in the contract.

Although the assessment team could not verify the actual number of each type of culvert, we utilized the quality assurance reports to review the construction of the culverts.



Site Photo 1. Existing road condition prior to construction (Photo courtesy of USACE)



Site Photo 2. Removal of excess road material (Photo courtesy of USACE)



Site Photo 3. Road excavation (Photo courtesy of USACE).



Site Photo 4. Road excavation, leveling, and marking (Photo courtesy of USACE).



Site Photo 5. Road compaction (Photo courtesy of USACE).



Site Photo 6. Sub-base material (Photo courtesy of USACE).



Site Photo 7. Tack coat (Photo courtesy of USACE).

The box culverts documented in the quality assurance (QA) reports were constructed as cast-in-place reinforced concrete structures. Site Photo 8 shows the culvert concrete testing. The box culvert construction, and reinforced steel application for the top slab prior to concrete placement are shown in Site Photos 9 and 10.



Site Photo 8. Culvert concrete testing (Photo courtesy of USACE).



Site Photo 9. Box culvert construction (Photo courtesy of USACE).



Site Photo 10. Box culvert reinforced steel (Photo courtesy USACE).

Based on our review of the QA reports, it appeared the reinforced concrete pipe culverts were constructed in the following manner:

1. Trench excavated to required depth.
2. Concrete poured to line the bottom of the trench.
3. Concrete pipe sections installed in concrete lined trench.
4. Concrete pipe sections jointed using a cement mortar to form a durable watertight joint.
5. Concrete poured to encase the concrete pipe.
6. Concrete headwalls constructed at each end of the concrete pipe.
7. Trench backfilled and compacted.

Site Photos 11 and 12 show part of the construction process noted above.



Site Photo 11. Trench excavated for pipe culvert
(Photo courtesy of USACE).



Site Photo 12. Completed pipe culvert
(Photo courtesy of USACE).

Site Photo 13 documents the top-coat of asphalt being laid for the new road. Finally, the completion of the newly constructed road with shoulders is shown in Site Photo 14.



Site Photo 13. Top coat asphalt laying
(Photo courtesy of USACE).



Site Photo 14. Completed asphalt road with shoulders
(Photo courtesy of USACE).

Site Assessment

On 19 September 2007, we performed an on-site assessment of the Showairrej, Taq Meka'ael, and Tak Harb Road Paving project. We were accompanied by the USACE GRN Engineer. During our site visit, we observed the newly constructed Showairrej, Taq Meka'ael, and Tak Harb road being used by the local community.

General Observations

All work completed appeared to meet the SOW requirements and the new 11-km asphalt road with shoulders from the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb operated as a functioning road.

During our site assessment, we observed that the following SOW requirements were completed:

- All rubble and debris had been cleared and removed;
- The sub grade preparation work of leveling, rolling, and laying sub base layers was completed;
- Drainage and ditching was completed; and
- The road segments were constructed.

During our site visit, we did not detect any instances of incomplete road construction. The constructed road and box culverts are shown in Site Photos 15 and 16.



Site Photo 15. Box culverts for new road.



Site Photo 16. New road in use.

Conclusions

The objective of the project was to construct a new 11-km asphalt road, with shoulders, from the main rural road to the villages of Showairrej, Taq Meka'ael, and Tak Harb, in the Ninewa governorate. This road serves multiple villages with large indigenous populations, bringing emergency services, transportation, and opportunity for commerce to this underdeveloped area.

The new asphalt road contributes to economic activity, emergency response, law enforcement, and safe pedestrian travel between Showairrej, Taq Meka'ael, and Tak Harb in the Mosul District of the Ninewa governorate. It replaced a road that was impassable, especially during the rainy season. Adequate quality management oversight by the contractor and the U.S. government enforced the contract's Statement of Work, ensuring construction quality and completeness.

In addition, a review of the contract file did not reveal any sustainability issues associated with the project turnover. There was no need for specialized equipment to be provided by the contract or for any maintenance manuals.

Recommendations and Management Comments

Our report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required. However, USACE GRD reviewed the draft report and offered no additional information or comments.

Appendix A. Scope and Methodology

We performed this project assessment in September 2007 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

In performing this Project Assessment we:

- Reviewed contract documentation to include the following: Contract, Contract documentation, and Statement of Work;
- Reviewed the quality control reports, construction progress photos, and closeout documentation; and
- Conducted an on-site assessment on 19 September 2007 and documented the results in Mosul, Iraq.

Appendix B. Acronyms

CERP	Commander's Emergency Response Program
GRN	Gulf Region North
km	kilometer
QA	Quality assurance
SIGIR	Special Inspector General for Iraq Reconstruction
SOW	Statement of Work
USACE	United States Army Corps of Engineers

Appendix C. Report Distribution

Department of State

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Director of U.S. Foreign Assistance/Administrator, U.S. Agency for
International Development

Director, Office of Iraq Reconstruction

Assistant Secretary for Resource Management/Chief Financial Officer,
Bureau of Resource Management

U.S. Ambassador to Iraq

Director, Iraq Transition Assistance Office

Mission Director-Iraq, U.S. Agency for International Development

Inspector General, Department of State

Department of Defense

Secretary of Defense

Deputy Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Deputy Assistant Secretary of Defense-Middle East, Office of Policy/International
Security Affairs

Inspector General, Department of Defense

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Director, Defense Finance and Accounting Service

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Department of the Army

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Principal Deputy to the Assistant Secretary of the Army for Acquisition,
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Deputy Assistant Secretary of the Army (Policy and Procurement)

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Assistant Secretary of the Army for Financial Management and Comptroller

Chief of Engineers and Commander, U.S. Army Corps of Engineers

Commanding General, Gulf Region Division

Chief Financial Officer, U.S. Army Corps of Engineers

Auditor General of the Army

U.S. Central Command

Commanding General, Multi-National Force-Iraq

Commanding General, Multi-National Corps-Iraq

Commanding General, Multi-National Security Transition Command-Iraq

Commander, Joint Area Support Group-Central

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Inspector General, U.S. Agency for International Development
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 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
Senate Committee on Armed Services
Senate Committee on Foreign Relations
 Subcommittee on International Development and Foreign Assistance, Economic Affairs, and International Environmental Protection
 Subcommittee on International Operations and Organizations, Democracy and Human Rights
 Subcommittee on Near Eastern and South and Central Asian Affairs
Senate Committee on Homeland Security and Governmental Affairs
 Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security
 Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
Permanent Subcommittee on Investigations

U.S. House of Representatives

House Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
House Committee on Armed Services
 Subcommittee on Oversight and Investigations
House Committee on Oversight and Government Reform
 Subcommittee on Government Management, Organization, and Procurement
 Subcommittee on National Security and Foreign Affairs
House Committee on Foreign Affairs
 Subcommittee on International Organizations, Human Rights, and Oversight
 Subcommittee on the Middle East and South Asia

Appendix D. Project Assessment Team Members

The Office of the Assistant Inspector General for Inspections, Office of the Special Inspector General for Iraq Reconstruction, prepared this report. The principal staff members who contributed to the report were:

Angelina Johnston

Yogin Rawal, P.E.